

COAL

MINING

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ANN ARBOR, MICH

DECEMBER, 1954

VOLUME 31, No. 12

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Christmas
Happy New Year



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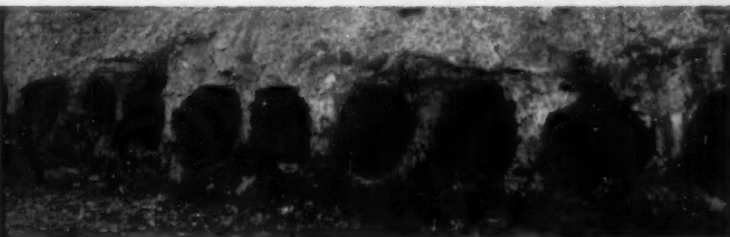
Houtzdale, Pennsylvania



**CUT
OPERATING
COSTS**

*with ESCO Blades
and End Bits*

SALVAGING LOST COAL



● McCarthy Coal Recovery Drills put new profit in worked-out strip mines by recovering clean lump or slack coal without disturbing overburden.

The drills bore horizontally into the heart of the exposed seam to pull out continuous streams of coal from depths of 100 feet and more.

Cost of this operation varies between \$1.50 and \$2.00 per ton, including amortization of investment. A three-man crew can handle the entire job, including loading.

Rate of recovery depends entirely upon operator skill, bench width, seam thickness and diameter of auger used.

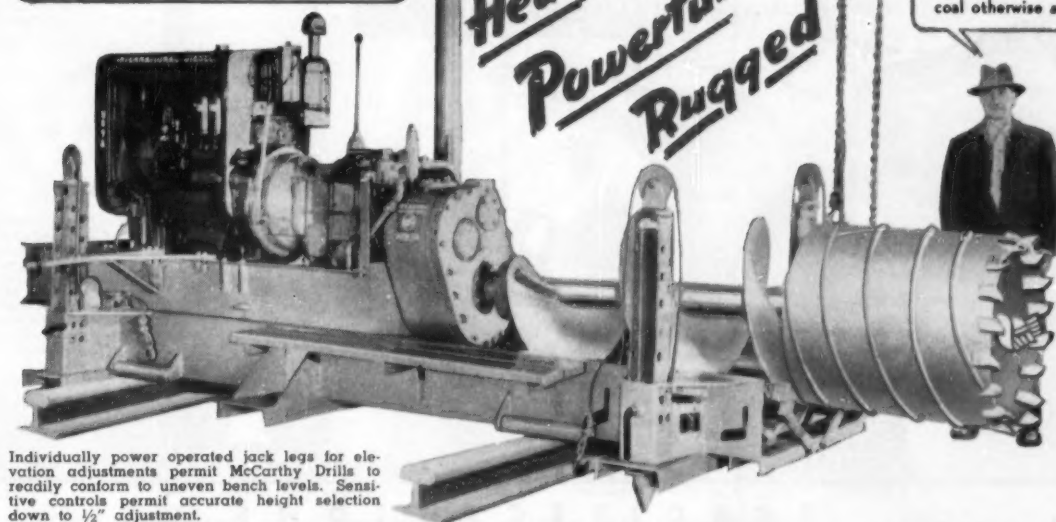
Near Salineville, Ohio, three men, using a single McCarthy Drill equipped with 24-inch augers, get out 90 tons of coal daily. The same number of men, working for the Bruns Coal Company, near Germano, Ohio, use 36-inch auger sections to produce 167 tons per day.

McCARTHY
New 36" Recovery
Drill; weight 9,700 lbs.

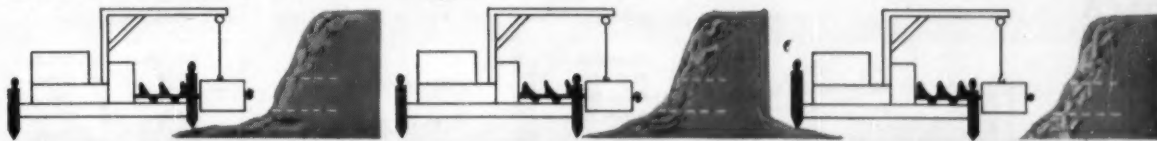
*Heavy
Powerful
Rugged*

McCarthy Auger Hoist makes easy the handling of individual auger sections to allow fast operation in or out with minimum physical labor.

"I salvaged 200,000 tons of coal otherwise abandoned."



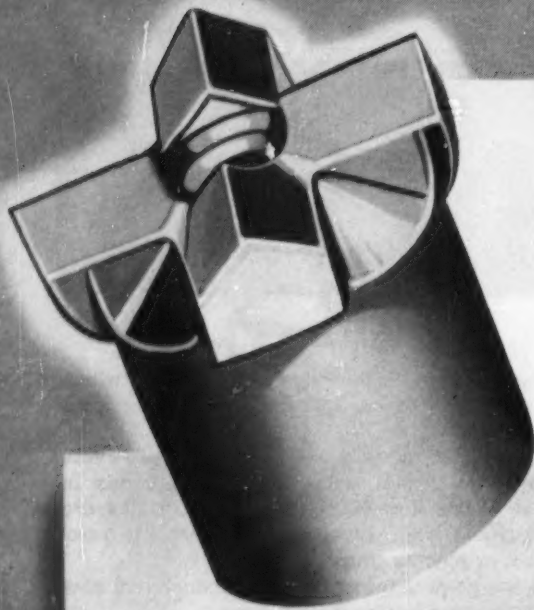
Individually power operated jack legs for elevation adjustments permit McCarthy Drills to readily conform to uneven bench levels. Sensitive controls permit accurate height selection down to 1/2" adjustment.



THE SALEM TOOL CO.

779 SOUTH ELLSWORTH AVENUE SALEM, OHIO, U. S. A.

Here's another

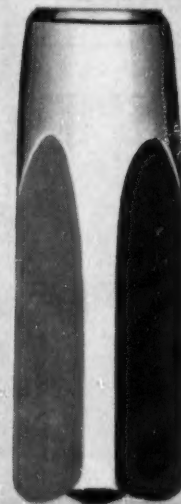
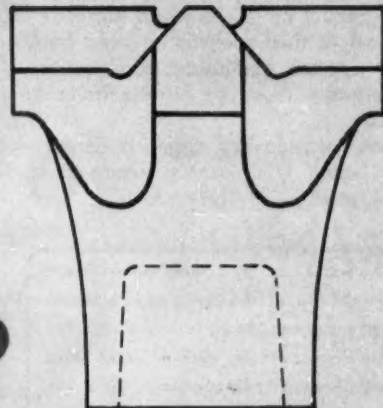


Simplicity of Attachment

Simplicity of Shank

Offset Gauge

Stronger Wings



The union of the bit and the rod after drilling has a cohesive strength of several tons . . . A sharp blow of sufficient weight on the end of the bit skirt will serve to detach the bit from the rod.

SPECIFICATIONS

Mines everywhere cut drilling costs with CRD DETACHABLE DRILL BITS • 4 - Wing Type - Center Hole - Side Hole

Class "A" Bits	Size	Color	Class "B" Bits	Size	Color
For class "A" drill steel connection on any steel. Best suited to 7/8" steel.	1-1/4	Aluminum	For class "B" drill steel connection on any steel. Best suited to 1", 1 1/8" and 1-1/4" steel.	1-7/16	Orange
	1-5/16	Pink		1-1/2	Green
	1-3/8	Deep Green		1-9/16	Yellow
	1-7/16	Brown		1-5/8	White
	1-1/2	Grey		1-11/16	Black
	1-9/16	Maroon		1-3/4	Red
	1-5/8	Deep Blue		1-13/16	Blue
				1-7/8	Tan
				1-15/16	Plain
				2	Pink
				2-1/8	Maroon
				2-1/4	Aluminum

Cans are labeled showing size of steel socket, gauge of bit, and color.

way to cut drilling costs!

Use CLEVELAND one-use CRD Detachable Bits



Lower cost per foot of hole — that's the goal of everyone who has rock to drill. And that was the goal of CLEVELAND engineers, too. They didn't fool around with the problem either.

Fifty years of experience in designing rock drills was put to work. The result — a one-use detachable bit that can save you money in a wide variety of applications.

This designing job wasn't done overnight. You can't produce the results our engineers were after in such a short time. Instead, these bits were put to work—and, for a number of years they have helped reduce drilling costs materially in mines, in quarries, and on construction jobs.

That's why we offer them to you now — with complete confidence in their ability to help you improve your rock-drilling cost picture.

These Features Mean Lower Drilling Costs for You

Faster Drilling Speed — Special offset gauge feature, which permits the use of thinner wings and a steeper reaming angle, greatly reduces binding and provides ample

clearance for cuttings. Result is a free, fast-cutting chiseling action that gives you greater drilling speed.

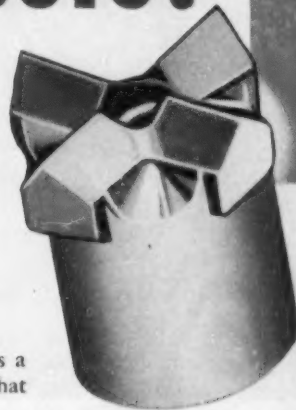
Less Drill-Steel Breakage — The method of attachment used with the CRD bit eliminates threads on the drill rod. Since a drill rod is only as strong as the root diameters of its threads, the tapered threadless CRD design provides longer drill-steel life — reduces drill-steel handling and reconditioning costs.

Lower Rock Drill Repair Costs — Because the CRD bit design reduces binding in the hole, there is less strain on the rotation parts of your rock drills. Rifle bars, rifle nuts, and chucks last longer. You get more drilling done at lower cost.

Since no special equipment is needed to thread rods, you owe it to yourself to try a can of CRD bits. They're ideal for roof bolting and for use in your stopes as well as in your headings. A short trial will give you first hand information on the ability of these bits to cut drilling costs in your property as they have in so many others.

Bulletin RD-29 gives detailed information. A copy is yours for the asking — just write for it.

RD-29

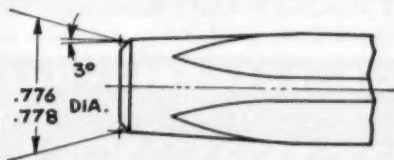


CLEVELAND ROCK DRILL DIVISION

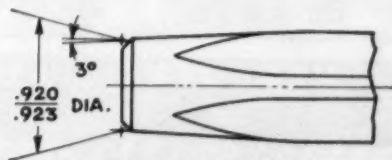
Westinghouse Air Brake Co.

12500 BERA ROAD • CLEVELAND 11, OHIO

Plants: Milwaukee, Wis. • Cleveland — Greenwich — Dunkirk, Ohio • Coldwater, Mich.



Taper shank dimensions for 7/8" steel.
Class A Bits



Taper shank dimensions for 1" hex,
1" Q.O., 1 1/8" and 1 1/4" rd. steel.
Class B Bits

The taper attachment shank used with the CRD bit is easy to make. You need no dies or other expensive threading equipment. Several simple, low-cost methods can be used for preparation — grinding, forging or machining.

COAL MINING

Vol. XXXI December, 1954 No. 12

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DALY'S IMPROVED COMBINATION MINE CHECK
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SALEM "HERCULES" AUGERS FOR ELECTRIC DRILLS

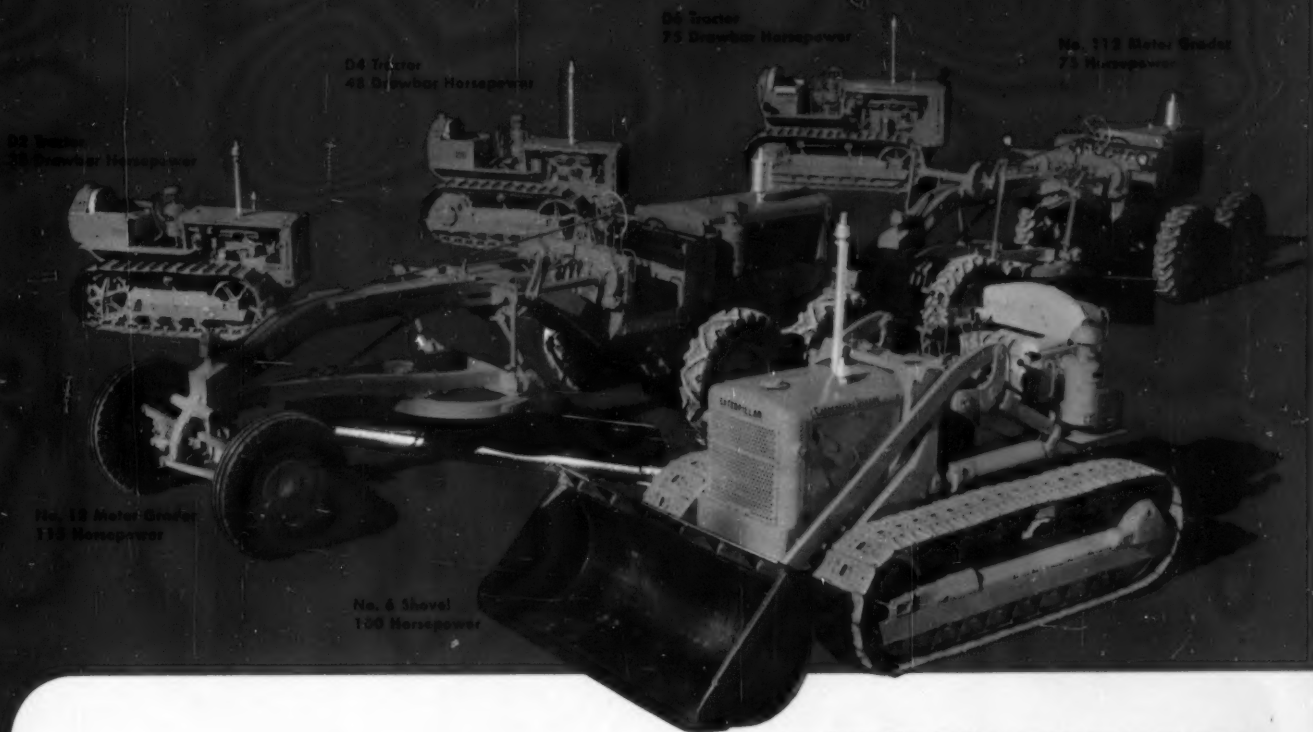
Made To Withstand High Drilling Speed, Whip And Torsional Strain Of Electric Drills



Drills holes faster—Will not snap off shank or chip points—Outlasts four or five ordinary augers.

THE SALEM TOOL COMPANY

SALEM, OHIO, U.S.A.



NEW

FEATURES...

NEW

WORK CAPACITY...

NEW

HORSEPOWER...

Your Caterpillar Dealer proudly announces another milestone in modern construction equipment. Adding to a long list of improvements, we now present the latest design and performance data on six improved popular CAT® machines. They have many new features that will speed your work, cut your costs and add to operator efficiency.

We've told you of the more powerful D8 and D7 and now, in line with Caterpillar's policy of *constant improvement* instead of annual "models," we bring you the more powerful D2, D4 and D6 Tractors. The D2 now has 38 drawbar horsepower, the D4, 48 drawbar horsepower and the D6, 75 drawbar horsepower. This added horsepower assures you of the power needed to get your jobs done faster and more economically. Other new machines are described on the following pages.

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U. S. ROUTE 250, CADIZ, OHIO • 4006 LAKE PARK ROAD, YOUNGSTOWN, OHIO

WALKER MACHINERY CO.

1545 HANSFORD STREET, CHARLESTON, W. VA. • 4010 EMERSON AVE., ROUTE #2 PARKERSBURG, W. VA.

CM-5

YOUR HEADQUARTERS FOR MONEY-MAKING CATERPILLAR EQUIPMENT

NEW

**...in the
CAT
No. 6 SHOVEL**

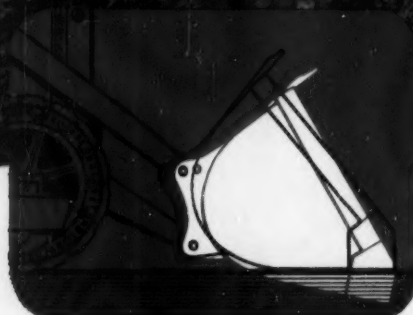


New Horsepower—efficient 100 HP Cat Diesel Engine makes the No. 6 more powerful . . . more efficient.

New 2-position Bucket—Permits quick adjustment for efficient heaped loads of loose material or fast digging of tough material.

2 1/4 Cu. Yd. Bucket—Matched to the power of the shovel. Properly curved for full, heaped loads.

Full Flow Hydraulic Oil Filter—assures clean oil at all times in hydraulic system.



Diagrammatic view of two-position bucket.

First acclaimed by owners and operators as the one tractor-shovel that outperformed *all* other tractor-shovels, the No. 6 Shovel has built its reputation as a money maker on every type of job. New features are now added to the Cat No. 6 Shovel to put it even farther ahead of the field. This is an example of Caterpillar's never-ending policy of making the best even better. Here are a few of the refinements—we invite you to inspect, first hand, the improved No. 6 at our headquarters.

CATERPILLAR... LOOK TO THE DEALER BEHIND THE PRODUCT

NEW

...in the **No.12 MOTOR GRADER**

- **More Power**—115 HP Cat Diesel for blading bigger loads, working in tougher material.
- **Faster Reverse Speeds**—for quicker, easier maneuverability. Low Reverse—4.0 m.p.h., High Reverse—6.3 m.p.h.

NEW

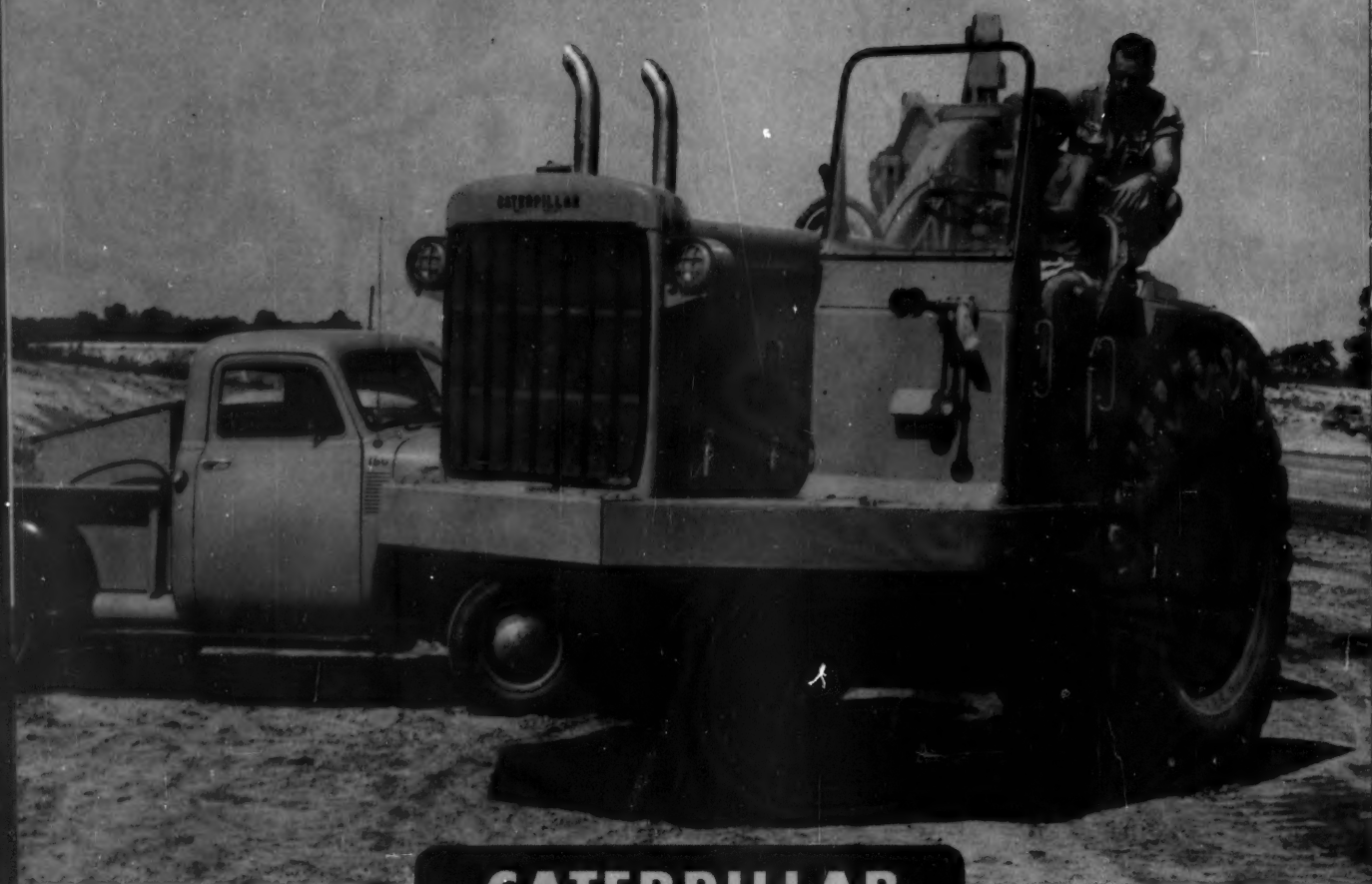
...in both **No. 12 and No. 112 MOTOR GRADERS**

- **One-lever-from-the-seat** starting simplifies starting.
- **Accelerator-Decelerator pedals** permit changing speeds without changing throttle setting.
- **Improved hand throttle** for easier control.
- **Easy-to-handle** and read redesigned instrument panel.
- **Clutch improvements** permit easier operation with less operator fatigue.

CAT MOTOR GRADERS

... the most-copied machines in the construction and road maintenance business, now bring you even more advantages. To the time-proved advantages of balanced weight and working speeds—instant selection of every usable blade position—Caterpillar ruggedness—long life—lowest operating costs, now are added the money-making features shown here. We invite you to inspect these features—and many more—at our headquarters.





CATERPILLAR

**WE OFFER THE ONLY COMPLETE LINE OF TRACTORS, SHOVELS, MOTOR GRADERS
AND EARTHMOVING EQUIPMENT BUILT ENTIRELY BY ONE MANUFACTURER
AND SERVICED BY ONE ORGANIZATION!**

We, your Caterpillar Dealers, stand behind every Caterpillar product in the field—whether it's brand new, or many years old. When you take delivery on a machine, our representatives help your men thoroughly understand

its operation and care. We continue to back its performance with skilled servicemen who *know* their machines. We carry an adequate parts stock. We invite you to stop by and inspect our facilities.

BECKWITH MACHINERY COMPANY

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CM-5

YOUR HEADQUARTERS FOR MONEY-MAKING CATERPILLAR EQUIPMENT

P1254A



HOW THE MAIN FRAME CONTRIBUTES TO TOP TRACTOR PERFORMANCE

One of the big reasons why more and more Allis-Chalmers tractors are being used today is their exclusive main frame design.

These frames are one-piece, all-steel welded structural members (like the girders in a bridge or the columns in a building). They help provide greater strength and flexibility to withstand shock loads . . . make possible better equipment mounting, improved weight distribution and outstanding service simplicity as well.

We invite you to see these advantages . . . first at your nearby Allis-Chalmers dealer . . . and then in a demonstration.

"ROLLS WITH THE PUNCH" — All-steel main frame flexes slightly under extreme shock loads . . . without transmitting strain to engine, clutch or transmission.

BETTER EQUIPMENT MOUNTING — This frame's compactness provides ample clearance for equipment like front-end shovels . . . permits wide track shoes . . . improves performance of entire unit.

IMPROVED WEIGHT DISTRIBUTION — Box A-frame allows location of main components for best over-all balance . . . putting more weight lower in tractor where it does the most good.

SERVICE SIMPLICITY — Since main frame carries structural load, power drive components can be readily removed, repaired or replaced without disturbing adjacent parts.

ALLIS-CHALMERS
TRACTOR DIVISION—MILWAUKEE 1, U.S.A.

Do You Know?

● A pill-size piece of radioactive element, obtained from the Atomic Energy Commission, is being used as the "brain" in a complicated machine that controls the thickness of cold rolled steel.

A piece of strontium 90 the size of an aspirin tablet, contained in a device known as a radioisotope thickness gauge, is able to detect amazingly slight variations in the thickness of sheet steel, and through electrical signals activate control equipment that instantly adjusts the two million pound compressive force of the wringer-like rollers through which the continuous ribbon of steel passes.

This latest method of determining steel thickness is being used in one of Republic Steel Corporation's plants by Republic technicians, in collaboration with outside physicists.

The strontium 90 does its detective work from within a small lead-armored capsule. This container, mounted below the moving ribbon of steel, beams beta rays from the speck of strontium 90 through the sheet steel. Above the moving steel is an ionization chamber about the size of a tobacco can. This chamber receives beta ray emanations through the steel. These emanations are strong or weak in proportion to the thickness of the metal.

Through elaborate electronic equipment, the beta ray signals control the "squeeze" of adjoining heavy rollers, which correct off-standard variations in thickness to within .0005, or half of a thousandth of an inch.

● Your body is a "factory" which can convert to a "wartime footing" almost immediately, stepping up materials for defense as much as 500%.

This is indicated in research at the Los Angeles Veterans Administration by Dr. Charles Craddock of the University of California at Los Angeles Medical School.

Dr. Craddock is investigating production capacity of the body's blood factory which is the bone marrow. The research is concerned primarily with production of white cells, one of the body's most important defense mechanisms.

Animal studies have revealed that in addition to a prolific "peacetime" output of white blood cells, which builds up large reserve stocks, bone marrow production lines convert to a "wartime footing" when large numbers of white cells are needed for defense. This steps up white blood cell production to a phenomenal rate.

Even after "bombing" of the blood factory with X-rays, which seriously damage bone marrow, production was not greatly reduced until reserves were depleted.

Apparently when large numbers of white cells are removed from circulating blood, as would be the case in an infection, the marrow automatically steps up production to meet the demands.

The study, which is being supported by the U. S. Public Health Service and Parke, Davis and Co., is important not only to a fundamental understanding of blood formation but of blood diseases as leukemia.

Here and There in the Coal Industry

● F. L. Dupree, president of Clover Darby Coal Co., Harlan, was elected president of the Harlan County Coal Operator's Association. S. A. Fox, manager of Northern Mines, Blue Diamond Coal Co., Middlesboro, was elected vice president. Members of the executive board are:

Pearl Bassham, president, Harlan Wallins Coal Corp., Harlan; Kenes Bowling, president, Bardo Coal Mining Co., Bardo; John A. Brown, general manager, V and C Coal Corp., Grays Knob; S. J. Dickenson, secretary-treasurer, Mary Helen Coal Corp., Coalgood; J. S. Greene, president, Garneada Coal Co., Middlesboro; Charles S. Guthrie, manager, Harlan Fuel Co., Yancey; L. P. Johnson, president, Perkins-Harlan Coal Co., Crummies; D. A. Perkins, president, Perkins-Harlan Coal Co., Liggett; R. C. Scott, president, Cornett-Lewis Coal Co., Louellen; Ed Taylor, manager, High Solint Coal Co., High Solint; A. F. Whitfield, Jr., president, Clover Fork Coal Co., Kitts; and B. W. Whitfield, III, manager Harlan Collieries Co., Brookside. George S. Ward is secretary of the association.

● Roland C. Luther, executive vice president of Peerless Coal and Coke Co., has been elected president of West Virginia Coal Mining Institute. Mr. Luther succeeds H. A. Quenon, division manager of Eastern Gas and Fuel Associates, who now becomes a member of the executive board. Elected as vice presidents were: C. E. Hough, president of Norton Coal and Coke Co.; C. R. Nailler, president of Christopher Coal Co.; George McCaa, general manager, Jamison Coal and Coke Co.; R. Glen Lazzell, research engineer for Island Creek Coal Co.; and S. Dunlan Brady, Jr., of the Gauley Eagle Coal and Coke Co. G. R. Spindler, head of the West Virginia University School of Mines, was reelected Secretary-Treasurer. The engineers selected George O. Tarleton, president of Consolidation Coal Co.

(Ky.), as chairman for the coming year, succeeding George R. Higginbotham, president of Consolidation Coal Co. (W. Va.).

● West Virginia Coal and Coke Corp. has sold to Investment Associates, Inc., its 51% interest in Paradise Collieries, Inc., which was organized in 1951 for surface operations in West Kentucky. Investment Associates, Inc., has employed Pittsburgh and Midway Coal Mining Co. under a management contract to operate the mine. The Pittsburgh and Midway Coal Co. of Chicago will continue to serve as exclusive selling agent.

● The Annual Meeting of the Southern Appalachian Coal Operators' Association, held Nov. 22 at the organization's offices in Knoxville, states: "The meeting was well-attended and the serious interest in all matters under discussion as shown last week in Pittsburgh at the annual meeting of the National Coal Association was reflected in the Southern Appalachian meeting. A greater spirit of co-operation for the betterment of not only the districts but for the industry as a whole was evident with a determination to bring coal production up and at a reasonable profit."

The following officers were elected unanimously:

President—C. R. Griffith, Southern Coal & Coke Co.; first vice president—Gordon Bonnyman, Blue Diamond Coal Co.; second vice president—L. C. Hammock, Straight Fork Coal Co.; executive secretary and treasurer—H. S. Homan. Directors—Ray S. Walker, Laddie Coal & Mining Co.; Mr. Bonnyman; H. D. Faust, Mahan-Ellison Coal Corp.; Mr. Griffith; Mr. Hammock; W. C. Hutcheson, Wind Rock Coal & Soke Co. (Warren Havdon, alternate); Ray Thompson, Cumberland Collieries; Fred Loving, Jr., New Jellico Coal Co.; W. T. Ray, Meadow Creek Coal Co.; Jacob T. Reams, Clear Fork Coal Co.; C. J. Potter, Rochester & Pittsburgh Coal Co.; and J. O. Archer, Blue Diamond Coal Co.



Left: R. T. Hair, Joy Mfg. Co.; A. E. Molinski, Secretary of the Assn; C. L. Brown, Treasurer; D. C. Jones, Director Mineral Industries Extension Service, Pennsylvania State University.



Left: Bill Schroeder, Master of Ceremonies; C. R. Spindler, Director School of Mines, West Virginia University; R. S. James, U. S. Bureau of Mines; W. R. Wood, Supt, Maintenance Berwind-White Coal Mining Co.; and president of the association, J. W. Hunt, Associate Professor, Pennsylvania State University and first Vice-Pres. of the Assn.

2ND ANNUAL MEETING OF THE MINING ELECTRO-MECHANICAL MAINTENANCE ASSOCIATION

The Second Annual Meeting of the Mining Electro-Mechanical Maintenance Association was held at the George Washington Hotel, Washington, Pennsylvania on Saturday, October 30. This association is dedicated to the furtherance of safety and efficiency in mining through better maintenance of equipment.

The general session of the meeting was opened at 2 P. M. under the direction of J. W. Hunt, Associate Professor of Mining Extension, The Pennsylvania State University. The address of welcome was made by President W. R. Wood, superintendent of the Berwind-White Coal Mining Company.

Mr. D. C. Jones, Director, Mineral Industries Extension Service, The Pennsylvania State College presented a paper LOOKING AHEAD WITH ME-MMA. This paper follows.

HIGHLIGHTS OF ELECTRICAL MAINTENANCE by R. T. Hair,

Factory Service Manager, Joy Manufacturing Company was well illustrated and informative.



Rosey Rosewell was the speaker at the Annual Banquet.

ECONOMICS OF THE COAL INDUSTRY by James Riley, Vice President, Hann Coal Company was timely and in the way it was presented it was effective.

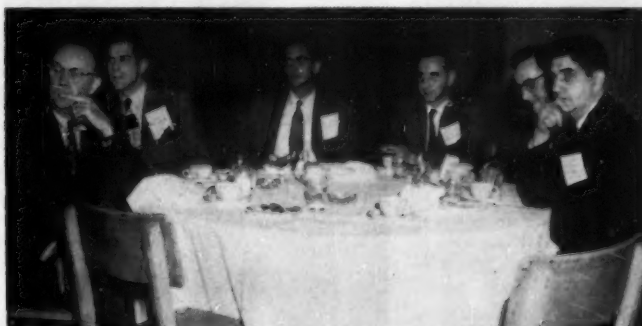
NEW DEVELOPMENTS IN MINING by G. R. Spindler, Director, School of Mines, West Virginia University, outlined research in hard tipped cutting points.

There was a cocktail party at 4:30 P. M. and Banquet at 6:00 P. M.

* * *

LOOKING AHEAD WITH ME-MMA

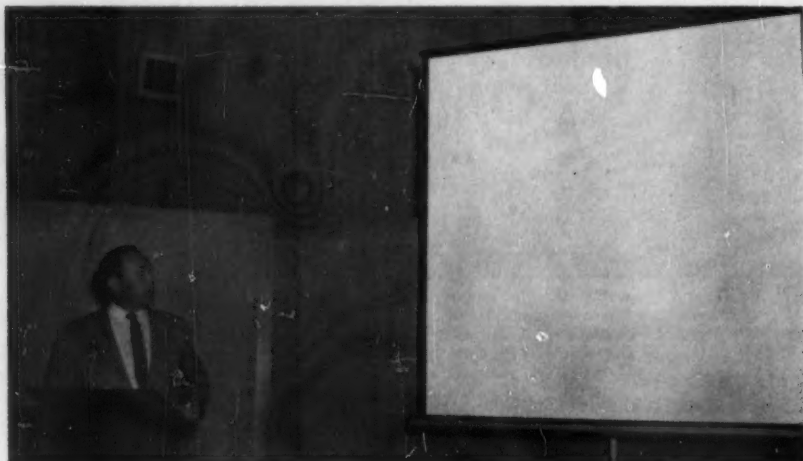
When Bob James asked me to address this second annual meeting of ME-MMA, he gave me an assignment that is generally known as "sticking your neck out." In other words, he suggested that I predict the future of our organization in connection with the mining industry. After studying some predictions of the past, and then review-



Left: C. W. Michelson, W. G. Kegel, Vesta Div. J. & L. Steel Corp.; Paul R. Kennedy, Schroeder Brothers; Robt. A. Huth, Universal Welding & Metals, Inc.; Philip R. Gillespie, Jr., Field Eng. EC & M Co.; Ben R. Waldburn, Vesta Div. J. & L. Steel Corp.



Left: Guy Little, Penn Machine Co.; Walter Koch, U. S. Rubber Co.; Fred Coombes, Vest Coal Div., J. & L. Steel Corp.; Ralph J. Davis and Thos. W. Henderson, Cooke-Wilson Co.



Above: G. R. Spindler, presenting his paper "New Developments in Mining."

Left: R. T. Hair, exhibiting his paper "Highlights of Electrical Maintenance" on the screen.

ing the events as they actually occurred, I came to the conclusion that any one who asserts that he can predict the future is either very wise or extremely foolish. Since I doubt my ability to qualify under the first classification, and I refuse to be associated with the second, may I label my talk as a review of our preparation for the future and a statement as to what we hope that future may be.

Every individual and every organization makes for the future, either knowingly or unconsciously. Every plan must have a goal toward which that individual or organization works, for the attainment of that goal is the chief reason for the plan. The goal of ME-MMA is clearly stated in the objectives of our organization—"to promote safety and the efficient operation of mining machinery and associated equipment; to provide an opportunity for the interchange of

experience and information on mining maintenance problems of mutual interest; to provide a means through which the members will have an opportunity to increase their knowledge in the application, selection, installation, care and operation of mining machinery and associated equipment; and, to cooperate with its members and the mining industry in the development, intelligent application and proper installation and maintenance of mechanical and electrical mining machinery and associated equipment."

Our initial plan to achieve these objectives was the present organizational set-up, namely, the central unifying and controlling body or Central Advisory Council, and the local operating groups or Branches. Through this plan we have been able to reach the mine maintenance man and provide him with the educational and stimulating programs that we feel are so essential to proper maintenance in the mining industry. At present we have seven Branches, all located in coal-mining districts in the tri-state area of Ohio, West Virginia and Pennsylvania, and all within a reasonable traveling distance of Pittsburgh, and headquarters of the Central Advisory Council. We have had our troubles in the operation of ME-MMA, due largely to the lack of unified thinking and understanding of procedures on the part of both Council and Branch officials, but we are still doing a good business at the same stand, and I am sure that all of us feel the results justify the efforts we have made in behalf of the organization.

Interest in our method of operation has brought a number of inquiries, some dating back several years, as to how our plan could be

adapted to mining areas other than the one we now serve. Until this year those of us who have been most intimately associated with the development of ME-MMA have never felt that expansion on a widespread basis was indicated until such time as our own Council-Branch organization was functioning efficiently. A recent inquiry from the Rocky Mountain area concerning the possibility of establishing an institute similar to or associated with ME-MMA aroused so much interest in the Central Advisory Council that a special committee was appointed to examine the entire problem of expansion. A report by that committee was presented to the Council and approved by that body on August 13, 1954. Inasmuch as that report may well be the foundation on which ME-MMA will expand, its major requirements should be of interest to all of us, and I give them to you briefly:



W. R. Wood, President, reporting the standing of the Association for the year.



James Riley, Vice-President, Hanna Coal Corp. gave a talk on the "Economics of the Coal Industry."



Left: Peter H. Cooper, Pennsylvania State University; R. E. Needham, U. S. Rubber Co.; Wm. A. Davis, Socony-Vacuum Oil Co.; Geo. E. Hubrig, U. S. Rubber Co.; Ben Martin, Martin Supply Co.; Paul H. Weise, Paul H. Weise Coal Co.



1) The Central Advisory Council has gone on record as favoring expansion of ME-MMA to other mining areas of this country.

2) Any group desiring to affiliate with ME-MMA shall forward a formal request for affiliation to the Council.

3) If the Council deems the request has merit, it shall require of the requesting group compliance with the following requirements:

a) Adherence to the objectives of ME-MMA.

b) Establishment of an Associate Council patterned after our own Central Advisory Council.

c) Establishment of one or more Branches in accordance with the Constitution and By-Laws, development of a program committee that will provide speakers from that area for the Branches, and development of a sound financial structure through individual and patron memberships so the Associate Council and its Branches will be independent of our Council for financial backing.

4) When the requesting group has complied with the foregoing requirements, they shall be privileged to act as an affiliate group of ME-MMA and use the title "Associate Council of ME-MMA" for their controlling body.

There are, of course, details in each of the foregoing items that would provide a more complete understanding of the affiliation process than I have given, but the essential requirements are as stated above.

In considering the future of ME-MMA, we must recognize that our organization to date has been tied in entirely with the production of bituminous coal, and that we will unquestionably have strong ties

with that industry in the future. In spite of the present distressed condition of the bituminous coal industry, its future is not only assured but one that will probably surpass the present industry in size and production. Let us consider that future from two viewpoints, production and equipment.

According to statistics, the industry should produce approximately 370 million tons of coal in 1954, a drop of 80 million tons from 1953 and the lowest production since 1938. Economists state that this loss is due to competition from gas and oil, a lessening in business activity, and other factors which I will not attempt to discuss. Those who should know predict that the condition is temporary, that coal is still the dominant source of future power for many years, and that adjustments to assure a fair market

are all that is required at the present time. Atomic-generated power appears to be a near-future competitor of coal, but no one is willing to predict how soon such power will become available on a widespread basis. For the immediate future, the intervention of the Federal Government will undoubtedly result in the restoration of some of our lost coal markets. Continued demand for coal by public utilities, expected to produce $3\frac{1}{2}$ times the present power output by 1975, should alone compensate for losses in other markets where convenience and cleanliness have given gas and oil

(Continued on Page 20)



Left: Maurice E. Fowler, Frank Valla, of the Harwick Mine, Duquesne Light Co.; H. J. Lang, Industrial Electric Co.; Geo. Stacey, Master Mechanic, Harwick Mine; Dick W. Welch, Duane Saxman, Kennametal; R. M. Smith, Joy Mfg. Co.; Albert Hanulik, Mechanic, Harwick Mine.



Left: D. H. Zellers and E. J. Gleim U. S. Bureau of Mines; Don Baker, Mfg. representative; Roy Collier, R. E. Shaw, both Chief Electricians, Harmar Coal Co.



Left: G. R. Fitterer, Professor, University of Pittsburgh; W. G. Stevenson, Gen. Mgr., Eillman Coal & Coke Co.; Alex Grant, Mgr. Mines, Youngstown Sheet & Tube Co.; J. V. McKenna, Dep. Secy., Penna. Dep. Mines.



Left: E. R. Cooper, Gen. Mgr. Mines, Jones & Laughlin Steel Corp.; George M. Thurby, V-President personnel, U. S. Steel Corp.; W. Garfield Thomas, Deputy Secretary, Penna. Dept. Mines; T. J. Crocker, Gen. Mgr. Mines, Bethlehem Steel Corp.

TWENTY-SIXTH ANNUAL BANQUET OF THE PITTSBURGH COAL MINING INSTITUTE

Our ability to survive and grow as an industry depends to a very large degree on our scientific progress. There is an industrial prob-



Above: Karl Konnerth, retired Manager Mines for the U. S. Steel Corp., was Master of Ceremonies.

lem that cannot be solved by scientific research. Knowledge gained through research is being used in industries of competitive standing. The coal industry, however, cannot be saved by science alone. Neither can it be saved without science, nor without everything else that represents knowledge and intelligence. Science and management of our mines must be united if progress in our industry is to continue. Needs and desires can be satisfied only by mutual cooperation of all.

The spectacle of indecision and

wait-and-see attitude that the coal industry is displaying toward scientifically proved automatic machine operation presents a sorry example of foresight. It is alienating our markets and abetting our competition.

We are making a dangerous error by spending our time trying to improve old methods of mining which are destined to become obsolete if not tomorrow the day after tomorrow while our competitors are taking our markets first in one locality then in another.

Right: G. L. Alston, D. F. West, Mine Safety Appliances Co.; Mrs. J. J. Forbes, wife of Chief Dep. Mines, Washington, D. C.; Mrs. D. F. West, Mr. and Mrs. H. W. Dauber, Mrs. G. L. Alston, all from the Mine Safety Appliances Co.



Left: Harry Swihart, Supt. Buckeye Coal Co.; Mrs. C. B. Tillson; Earl Overtorf, Joy Mfg. Co.; Mrs. Russell Vance, Bob Proctor, Joy Mfg. Co.; Mrs. Overtorf; C. B. Tillson, Mine Supt., Crucible Fuel Co.; Mrs. Swihart, in front center is Russell Vance, Joy Mfg. Co.



Left: Mr. and Mrs. H. W. Meader, Jr., Mr. and Mrs. Bailey M. Neel, Mr. and Mrs. C. J. Luke, all from the Westmoreland Coal Co.; Mr. and Mrs. C. B. Sims, Cardox Corp.



Left: Geo. Deike, Mine Safety Appliance Co.; J. J. Forbes, Chief Dept. of Mines, Washington, D. C.; Gordon E. Smith, Dept. Mines Anthracite Region; R. L. Laing, Secretary Central Penna. Coal Operators Assn.



Left: Henry Rose, President, Pittsburgh Coal Co.; E. B. Winning, Asst. V-Pres. charge of mines, Republic Steel Corp.; H. P. Greenwald, U. S. Bureau of Mines, W. W. Dartnell, Supt., Hillman Coal & Coke Co., and secretary of the Institute.

We are constantly being reminded that our industry is suffering from a serious shortage of trained minds. One needs only to look around to see a very great need for highly trained men if we are to fulfill our obligation to this nation in assuring an adequate fuel supply to keep it strong.

Through schollars of inquiring mind, we must find new roads to knowledge, new kind of knowledge that can be proved by experiment rather than by appeal to authority, knowledge that will lead to material prosperity as well as to deeper knowledge. We must try new methods and hope to find out why they succeed or fail.

In face of this urgent need for brain power, private and government studies show that about 50% of this nation's most talented youth not only does not get to college but never even finishes high school. Extra bright youngsters unaware of their mental capacities, through poverty, discouragement or confusion, are drifting into life activities far short of their capabilities. Abilities inherent in the decendants from European nations in the coal industry, which have been often covered over by supression or subjugation or both, can quickly be brought out. The thousands of

years of drilling good, healthy habits into the human tissue of the European nations could yield talent the coal industry so sorely needs.

The Annual Banquet of the Pittsburgh Coal Mining Insitute, besides taking place in the heart of the industry, is the largest gathering of coal mining men exemplifying a healthy cooperative status that lends itself to the propagation and sponsorship of new ways of mining coal. What is needed is an outstanding personality or group of personalities to take the initiative and a gathering like this is a good group from which to select a leader or group of leaders to point a way to better conditions in the coal industry.



The Honorable John S. Fine, Governor of Pennsylvania was the principal speaker.



Left: Chas. Dinsmuic, Arthur Moore, D. E. Campbell, Sam Dzinban, Sigmund Pawloski, Joseph Waitkus, Arthur Hall, all of the Allegheny Pittsburgh Coal Co.; Jas. J. Federoff, North Star Coal Co.



Left: Mr. and Mrs. Jack Connor, Gen. Mgr., Allegheny-Pittsburgh Coal Co.; Mr. and Mrs. Geo. C. Trevorrow, Gen Mgr., Harmar Coal Co.; Mr. and Mrs. J. P. Howell and Mr. and Mrs. Eddie Vant, both with the Jeffrey Mfg. Co.



Left: Mrs. J. M. Blair, Mr. and Mrs. J. M. Page, Mr. and Mrs. Adam Bronakoski, Mr. and Mrs. Mike De Pietro, Mr. J. M. Blair, all from The Vesta Div. J. & L. Steel Corp.



Left: Theresa Acita, guest; Harry Savisky, production coordinator; Mr. and Mrs. Charles Meyers, of the Mine Safety Appliance Co.; Mr. and Mrs. George E. Williams, Williams Coal Co.; Mr. and Mrs. William R. Sweeney, Mine Safety Appliance Co.



Left: Mr. and Mrs. Frank Coprivnicar, Mine Foreman; Mr. and Mrs. Maurice Fowler, Safety Eng.; Mr. and Mrs. George Stacey, Master Mechanic; Mr. and Mrs. John Draper, Mining Eng.; Mrs. James Truax, wife of supt. All from the Harwick Mine Duquesne Light Co.



Left: Mr. and Mrs. J. C. Moore, U. S. Steel Corp.; Stanley Budzik and John Drisnich, United Mine Workers of America; Mr. and Mrs. Henry Jamison and Mr. and Mrs. O. A. Schwamke, of the Hulbert Oil and Grease Co.



Left: Mr. and Mrs. Ed Weise, Weise Coal Co.; Mr. and Mrs. J. R. McVicker, Mining Eng., and Mr. and Mrs. F. J. Reed, Chief Eng., both of the Republic Steel Corp.



"Whitey" Kerlin, Superintendent, Paul Kerlin Construction Company at their strip mine near Boswel, Pa.

● "Mining on the Move," a 14-minute sound-and-color movie picturing and describing modern haulage and materials-handling methods used in a wide variety of mining applications, has been produced by LeTourneau-Westing-

house Company, Peoria, Illinois.

The film shows Tournapull scrapers working in diamond and iron fines, rear dumps in bauxite, iron, gypsum and copper mine applications, and rubber-tired dozers at titanium, magnetite and gypsum mines.

The movie depicts equipment in clean-up operations at the dump and around shovels, cleaning up after blasting, maintaining waste dumps, dozing material into hopper, shoving railroad cars, traveling back and forth to scattered job assignments, and other typical mining applications.

The film is available without charge on a loan basis to engineering groups, school classes and other organizations interested in mining operations.

Inquiries concerning "Mining on the Move" may be directed to the nearest LeTourneau-Westinghouse distributor, or to Advertising Department, LeTourneau-Westinghouse Company, Peoria, Illinois.

● To improve field service repair work on earthmoving machinery in the immediate area surrounding Somerset, Pa., Beckwith Machin-

ery Company has now stationed a resident serviceman at 1046 S. Edgewood Avenue in Somerset.

In announcing the appointment, Mr. George N. Beckwith, President of the equipment distributorship, stated, "We Feel that this will enable us to give our good friends and customers in this area improved service, faster work and reduced costs as well as less downtime."



Mr. William Wright has been with Beckwith Machinery Company in the Pittsburgh Service Department for several years and is prepared to service equipment in Somerset, Bedford, Cambria, Blair and Fayette Counties Pennsylvania, as well as Garrett and Allegany Counties in Maryland. His telephone number is Somerset 5829.



The H & D Trucking Company using auger in the 24 inch Lower "A" seam of coal.

HIGHWALL AUGERING IN CENTRE COUNTY, PENNSYLVANIA

A duty of industry, regardless of its type or where it may be located, is to utilize the latest and best production machinery available. To see that the consequences to employment, if technological advances are not utilized, is clearly understood in the community from which industry draws its labor is also the responsibility of industry. The manufacturer of modern machinery, who in the coal industry is considered the technologist, has a great part to play too in helping the industry make the intellectual

efforts required in the shaping of its communities' institutions to meet the requirements of an age in which technological advance plays such a great part as at present.

Center County, Pennsylvania, lies at the northeast corner of the coal deposits in Central Pennsylvania and since World War Two has been strip mined extensively. Recently additional modern machinery has been employed to recover coal lying under cover that is too high to strip or lying under a rail-

road right of way.

Donahey and Company is using two McCarthy highwall augers to recover coal left by stripping in the "A" and "B" seams. The "A" seam averages 24 inches thick. In the present pit a 16 inch auger is being used to mine coal lying under a railroad, coal which could not be gotten in any other way without moving the railroad. The "B" seam averages 22 inches thick. Both seams are augered up to 193 feet deep then cross augered to get 70% of the coal.

The River Hill Coal Company is using a 26 inch McCarthy auger with hydraulic feed. It mines up to 90 feet deep holes and two men and truck driver average 90 tons per shift.

The H & D Trucking Company uses a 24 inch McCarthy auger with hydraulic feed. They auger up to 158 feet in the Lower "A" seam and produce up to 65 tons per shift with 2 men and truck driver.

Roguex and Trimpey are using an 18 inch hydraulically driven McCarthy auger in the "E" seam. Augers are driven up to 100 feet deep and production averages 30 tons per shift.

(Continued on Next Page)



An 18 inch auger in the "A" seam at the Donahey Coal Co. recovering coal lying under a railroad.

Right:
Auger working in the "B" seam at the
Donahey & Company pit.



Left:
The 26 inch auger with hydraulic feed
working at the River Hill Coal Co.



Right:
The 18 inch auger in the Roguex and
Trimpey pit.



Caterpillar Diesel D7 Tractor equipped with No. 7A Bulldozer moves bucket stick on coal stripping operations near Cadiz, Ohio. This Tractor is used for various clean-up jobs on stripping operations.

● The second shift team representing Enoco Collieries Corp. No. 5 Mine took top honors at the Indiana Third Annual Safety and First Aid Meet held at Princeton, Ind. Second place was won by the Princeton Mining Co., King's Mine; third, Wolfe and Koenig Corp.'s Sunshine Mine; fourth, the first shift team of Enoco Collieries Corp. No. 5 Mine, and fifth, Snow Hill Corp. Green Valley Mine. Teams and members were awarded trophy and merchandise prizes and the individual sterling silver safety award belt buckles presented by NCA were awarded to the first shift team of Enoco by Harry Gandy, Jr., NCA safety director.



PENNSYLVANIA COAL FESTIVAL

The First Pennsylvania Coal Festival was held at Carmichaels, Greene County, Pennsylvania and was sponsored by the community of Carmichaels and the Veterans of Foreign Wars. This was a two day affair, the evening of the first day being devoted to a regular meeting of the ME-MMA at which John E. Roblee, Construction and Application Engineer for the Westinghouse Electric Corporation was the principal speaker.

The Festival was featured by a two day coal loading contest on the grounds of the Veterans of Foreign Wars organization.

It is proposed to make this an annual affair and carry displays of coal mining machinery and sup-

plies. This year there were about 10 exhibitors of mine equipment or supplies.



John E. Roblee Construction and Appliance Engineer for Westinghouse Electric Corp. was the principal speaker.



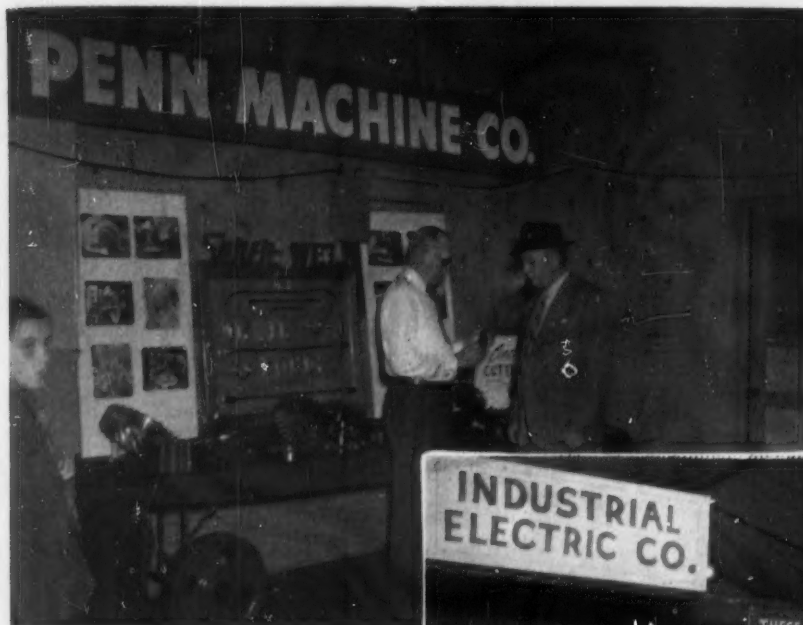
Left: F. A. Burns, secretary; J. F. Whalen, President of the Greene County Branch; D. C. Jones, Director Mineral Industries Extension Service, Pennsylvania State University; C. B. Tillson, Supt., Crucible Fuel Co.



Left: Walter Coow, Asst. Eng., U. S. Steel Corp.; Ed Lee, Owner, Lee Supply Co.; Bill Peters, President, Stimple and Ward; B. Frederick, President Biggies Coal Co.



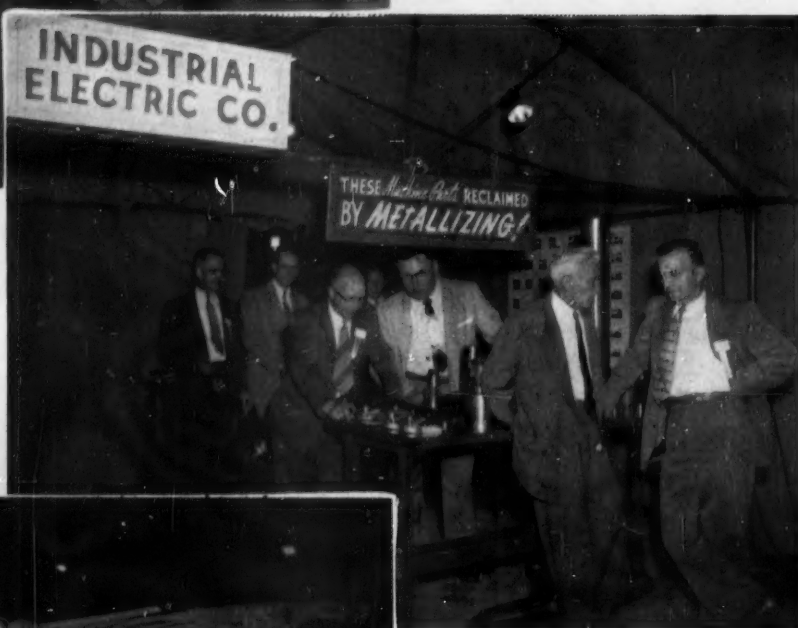
Left: H. S. Jamison, Hulbert Oil & Grease Co.; J. E. Pringle, State Dept. Mines; J. R. Engott, M. Minnich, E. K. Hickie, all Mechanics for the Duquesne Light Co.



Guy Little, Penn Machine Co. representative showing Mr. Allen Brooke, Gen. Mgr. Mines of the Mather Collieries some feature of his company's product.

Hub Lang, President, Industrial Electric Co. showing Biggie Frederick, Owner, Biggies Coal Co. the advantages of Metalizing.

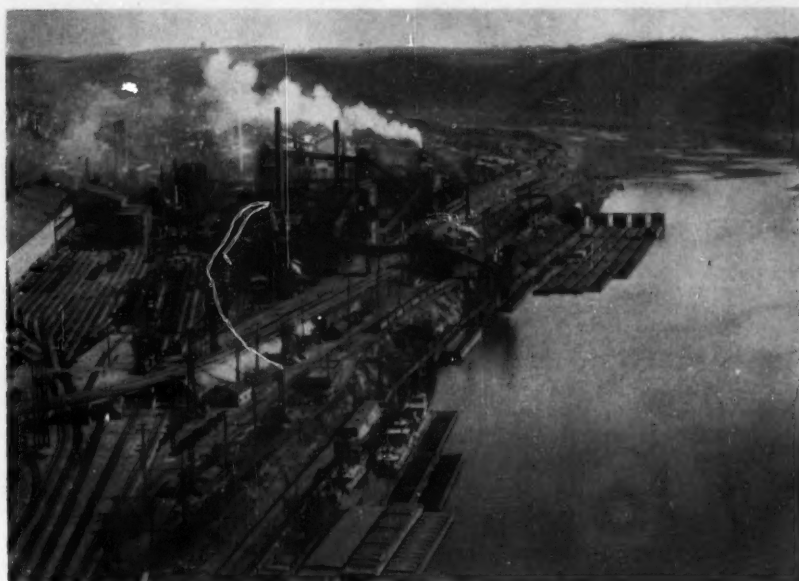
A Joy coal loading machine was placed on exhibition at the Fair by the Duquesne Light Co.



● Joy Manufacturing Company, Oliver Bldg., Pittsburgh, Pa., has announced the introduction of a new line of hydraulic hose and couplings, tradenamed "SURGEPRUF", for medium-high and high pressure service. The couplings, manufactured to J.I.C. standards, feature a "double-wedge" grip which, the manufacturer claims, makes possible assembly on rubber

covered hose without skiving. Through use of a special slotted bushing the manufacturer has made possible retightening the SURGEPRUF coupling on the hose without disassembly when and if it comes loose through vibration or flexing. No special tools or mandrels are required for assembling SURGEPRUF couplings on the hose.

● The team representing Southern Collieries, Inc., at Lake City, Tenn., took first place in the Coal Mining Division of the Second Annual Tennessee Mineral Industries Safety Day First Aid Contest held recently at Knoxville. The team was presented with the victory award trophy of NCA. Second place was won by Blue Diamond Coal Co., Eagan, that team receiving the UMWA trophy. In the Mine Rescue Contest, first prize went to the team representing the New Jellico Coal Co. at Vasper. The assembled crowd heard remarks by the Tennessee Commissioner of Labor and also witnessed pole-top resuscitation. Jake R. Miller, chief inspector of the Tennessee Division of Mines, was general chairman of the meet.



Jones & Laughlin Steel Corporation's busy river dock at Hazelwood, Pa., has been reconstructed by The Contracting Division of Dravo Corporation. The new Monongahela River dock of steel sheet pile cells replaces a wooden facility which constantly needed repair and maintenance. Coal barges are unloaded at the dock and by-products are shipped out.



● Davey Compressor Co. announces a new self-contained, truck-mounted rotary drill employing both compressed air and high pressure water.

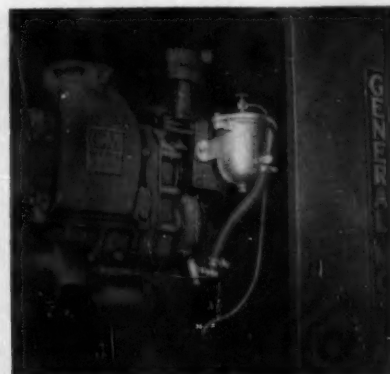
Known as Model M7-SA, it is reputed to be especially efficient for water well drilling, uranium, and oil and mineral exploration work. It is available in capacities up to 2,500 ft. of 8-inch hole.

Suitable for mounting on any make of truck, the unit's air compressor and mud pump are both driven direct from the truck engine by a heavy-duty power take-off. The compressor is a Davey 500 c.f.m. unit. Pump is of heavy duty

duplex type.

The Model M7-SA mast is of tubular open face box type construction, 37 ft. high. It handles 20 ft. drill pipe sections and is raised and lowered with hydraulic cylinders of 20,000-lb. rated capacity. Dual drum hoisting assembly provides extra great capacity of line and "pull".

A new feature is the location of all dials and controls on an instrument panel at the left rear of the truck. This gives the drill-runner complete command of the machine at all times. Weight of the unit, complete with truck, is approximately 21,000 lbs.



On Series "71" models (shown) the water filter mounts on the side pad of the balance weight cover. On "6-110" and "4-51" models the filter mounts on the side of the block. Necessary parts for mountings are included in the filter assembly.

● Completely Closed Water Circuits, Solution to Stream Pollution Problems is the Title of Catalog No. 200 by the Haworth Engineering & Mfg. Co. 930 Second Ave., Birmingham, Alabama.

It is the opinion of the author that when the causes of the stream pollution are fully recognized and the water clarification processes integrated with the coal preparation processes, there will be no waste water and no waste products, and any coal preparation plant can be operated without concern about stream pollution laws no matter how rigid they may be.

This may mean rearrangement in some coal preparation plants but does not necessarily require the invention of new and involved processes or complicated and expensive equipment so much as the utilization of equipment that is readily available and effective when arranged as required to adequately and economically prepare the coal for the existing and future markets without polluting the water or air.

The coal preparation and water clarification processes and equipment described and illustrated offer certain solutions to the problems ordinarily involved in coal preparation plants and, it is hoped, financially profitable solutions. Other solutions will also become available, no doubt, and it is believed that the coal industry can easily become entirely independent of stream pollution laws insofar as the preparation plants are concerned.



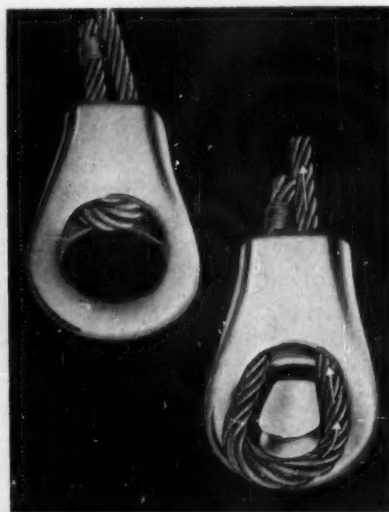
Caterpillar Diesel No. 12 Motor Grader is clearing top dust on coal stripping operations near Cadiz, Ohio.



This large size wire cutter has recently been placed on the market by the H. K. Porter Company, Pittsburgh, Pa.



Caterpillar Diesel D7 Tractor equipped with No. 7A Bulldozer is used for various clean-up jobs on coal stripping operations near Cadiz, Ohio.



● A new wire rope fitting called the Wedge Type Choker Socket has just been announced by Electric Steel Foundry Company, of Portland, Oregon, and Danville, Illinois. The Wedge Choker Socket has been designed to provide a quick, inexpensive method of putting an eye in a piece of wire rope. It can be installed in the field without any special equipment or tools in three minutes.

The construction industry, long familiar with wedge type sockets, will be quick to recognize the advantages of this wire rope ending. To install, it is only necessary to thread the rope up through the socket, loop it around and thread it back in the socket, place the wedge in the loop formed, and pull tight. It can be quickly disengaged by driving out the wedge. Cast of work-hardening manganese steel, the socket provides a long wearing eye that will not pull shut, that will be light in weight and fast and easy to handle. No wire jagers, as are commonly found in an eye splice, to cut hands and rip clothing.

The Wedge Type Choker Socket and wedge in the $\frac{1}{2}$ " and $\frac{5}{8}$ " sizes weighs $3\frac{3}{4}$ lbs., sells for \$4.75, and will be available at most wire rope dealers. If the wire rope dealer in your area does not have the ESCO Wedge Type Choker Socket please write Electric Steel Foundry Company, 712 Porter Street, Danville, Illinois, or 2141 N. W. 25th Avenue, Portland, Oregon, or ask your dealer to write.



● A new low-bed water truck that is capable of carrying extra large bulk loads is announced by Davey Compressor Co.

Known as Model FT-50 Flat-Top Water Truck, it is offered as a com-

panion unit for Davey Rotary Air Drills and Mud Drills.

The truck employs a large capacity, flat water tank, the top of which serves as the bed of the truck. Tank is constructed of

heavy-gauge steel with the floor section covered with safety-plate. 16 removable metal stakes are located along the edges of the top side of the tank to prevent loss of cargo.

According to the manufacturer, one of the truck's outstanding features is its vacuum-lift system of tank filling. This utilizes suction from the manifold to draw water into the tank. Twin check valves prevent water from being sucked into the manifold. The tank interior is divided by baffles into 12 interconnecting compartments which prevent rapid shifting of fluid weight.

Standard equipment includes water tank, 2 inch suction hose, 16 removable bed-stakes, tool box on each side, winch, vacuum-lift and 3-gal. drinking water can. Tanks are available in 650-800 and 1,000 gallon capacities.

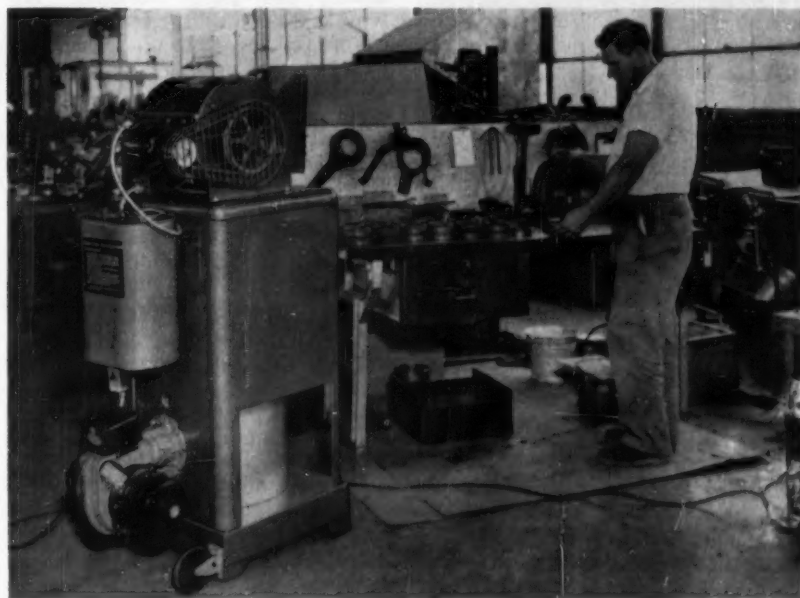
For additional information, write to Davey Compressor Co., Kent, Ohio. Ask for Bulletin E-260.

● Simplified controls and an attachment, which easily converts the portable heater into a summer cooling unit, are outstanding features of the new Model PW-189, just announced by Fageol Heat Machine Co., Kent, Ohio.

The new machine can be placed in operation simply by plugging in the electric line and snapping a switch. Air intake of the oil burner is adjusted by loosening one screw and varying the size of the intake opening. The machine is completely self-contained, readily portable and does not require a vent, flue, or chimney.

Conversion of the heater into a fan is accomplished by changing the top blower mounting, said to be a 5-minute task. As a fan, the Model PW-189 delivers 1500 c.f.m. of cool air.

Heating capacity of the machine is 189,000 B.T.U. per hour. Heat is sprayed out at floor level and is concentrated in a work zone from floor to about 6 feet in height. It covers an area of approximately 3,000 square feet.



Dimensions of the new model are 21 x 33 x 58 inches. Weight is 235 lbs. The machine operates on regular furnace type fuel oil or kerosene. It will also operate on

100% catalytic cracked oil. Fuel tank is of 6-gallon capacity.

For further details, write Fageol Heat Machine Co., division of R. D. Fageol Co., Kent, Ohio.

● IN ITS FIRST COMPETITION since winning the National First Aid Championship in the Fall of 1953, the safety team from Bergoo No. 4 Mine of Pardee and Curtin Lumber Co. triumphed at the Mid-

State Coal Mining Institute's Fourth Annual Safety Day held recently at Camp Caesar, W. Va. Another Pardee and Curtin Team from Bolair Mine took second place, and in third place was the

team from Peters Creek Coal Co., Cornelia Mine near Summerville.

● More than 94% of all coal used in electric utility plants is consumed East of the Mississippi River.

SECOND ANNUAL MEETING OF THE MINING ELECTRO- MECHANICAL MAINTENANCE ASSOCIATION

(Continued from Page 9)

an advantage. I feel certain that the mining of bituminous coal will continue, and at a greatly increased rate of production, within the future that most of us here today will witness.

In regard to the use of equipment in the future production of coal, the trend of the immediate past can be projected into the future with considerable confidence. In the past 30 years we have witnessed almost a complete transformation of the bituminous coal industry from hand loading to mechanical operation. Today over 90 per cent of the underground production is machine cut, and 78 per cent is machine loaded. If we include strip coal which is loaded entirely by machines, 84 per cent of our total production is mechanically loaded. Mechanical cleaning of coal has jumped from 38 per cent in 1950 to 54 per cent in 1954. New machines are being introduced constantly, either as advanced designs of previously used equipment or as new models that replace several other machines in the production cycle. Greater productivity with fewer men has resulted from the use of these newer machines, with the result that in some areas coal is now being produced at a cost equivalent to that of 1939 in spite of increased labor and material costs.

All of the foregoing points to the increased use of equipment for all or practically all coal mining operations in the future. That equipment will be even more specialized and complicated than the machines of today, and special emphasis will be placed on controls that will eliminate the need for manual attention on the part of several attendants. Not only will such machines require skilled operators but the men who will maintain them in good operating condition must be even more highly trained than today. I believe that the training of both operators and maintenance men will become not only a necessity, but a requirement for employment or continuance in a particular capacity.

It is in relation to the training of mine employees that the future of our organization should be considered. Specialized training on specific phases of operation and main-

tenance will undoubtedly be provided on a widespread scale in the future by local, state, or federal agencies created for that specific purpose. We have such agencies operating today, but we are not conflicting with their purposes, for our organization has been able to serve the industry in an area with a greater degree of vocational training of mining men than perhaps any other in the entire country. Such training leads to an interest in ME-MMA, and participation in ME-MMA leads to an interest in vocational training. With a greater need for vocational training in the future, a greater interest in the supplementary educational service of ME-MMA should result.

During the investigation of the problem of expansion by a committee of the Central Advisory Council, the question was raised as to how we could serve the strip mining industry. Although they produce bituminous coal, frequently in competition with deep-mined coal, strip miners have never had the same attitude on training that prevails among deep-mine workers. Attempts to establish training programs for the strip pit workers of Pennsylvania have, so far, had little success. Even in those districts served by our Branches, there has been little interest shown in the affairs of ME-MMA. This may be due to the generally fewer men involved in a strip operation, both as to operation and maintenance. Also, strip pits have short lives, and the workers may not consider themselves permanent residents of the district.

However, the failure to attract strip pit workers to our presently established Branches may be a fault of our own making, inasmuch as we have pointed our programs entirely toward deep-mine maintenance and operation. It is possible that our Branches, if local strip mine personnel can be encouraged to join, could develop local programs of interest to the strip miners as well as to the deep-mine workers. I do not foresee the establishment of many, if any, new Branches in districts with strip-mine production only, although any development along this line would give me great satisfaction.

Someone has mentioned the possibility of ME-MMA spreading into hard-rock mining areas. If we consider the nature of that type of mining, the idea is well worth considering. Much of the equipment

used in hard-rock mining is similar to that used in coal mining, and in many instances is made by the same manufacturer. Maintenance is a big problem, both from the amount used and the strenuous service given it. The potential for establishment of an institute similar to ours exists in many hard-rock mining areas but, so far, no one connected with that type of mining organization has shown any interest in ME-MMA or contacted us concerning its application to hard-rock mining.

Summarizing the possibilities for the future of our organization, it appears to me that there are several distinct phases to this future, each of which will develop as those of us now active in ME-MMA give our efforts toward that development.

1) I believe that our present Council-Branch set-up will continue in much its present form, although the addition of another Branch or two is not out of the question. Individual Branches will grow stronger as the member recognize their responsibilities and assume them, both in regard to proper operation of the Branch and providing service for all of the mining industry in that district.

2) Approval by the Council of the committee report on expansion has provided us with the means for expansion, if there is any desire to develop an Associate Council in any other area where mining is a dominant industry. In this connection, the term "mining" now has other meanings than that originally intended when ME-MMA was first organized; it can mean the bituminous coal mining industry, the anthracite industry, the metal mining industry, or the non-metallic hard-rock mining industry. A review of our Constitution and By-Laws will show that there are no restrictive statements that would prevent groups in any of these industries from developing a Council-Branch arrangement in any area served by them. The founding fathers of our organization who wrote the Constitution founded better than they knew at that time.

3) Expansion of ME-MMA will depend on the activity of its members and how they spread the gospel. This can be done in several ways, such as:

a) Development of articles in trade journals telling of the activities of either the present Council or individual Branches.

This will serve to notify mining men everywhere of our activities and purposes.

b) Members whose duties require them to travel to other mining areas can acquaint mining men in those areas with the objectives of ME-MMA and the procedures to follow in affiliating with us.

c) Publications concerning the organization can be developed and made available for distribution to interested mining men, either upon request from a non-member or at the suggestion of a member.

The foregoing comments on the growth of ME-MMA are all conditioned on the acceptance of certain responsibilities by its members. The type of future that any of us will have will depend largely on the effort that each of us makes in building that future. And that same law, which is universal in its application, applies to ME-MMA—our future will depend largely on what we do in building toward that future. Looking ahead is the distinguishing characteristic of vigorous organizations—the future will show how we measure up in that respect.

M-nitowoc 4500—4 yd. Dragline 120' boom. A very good buy.

Page 9 W 10 yd. Dragline with 190' boom — ideal for high cover.

Bucyrus 54 B High Front 2 yd. Shovel. Can be seen operating.

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● A 28-page folder in color, describing and illustrating features of the 208 hp rubber-tired tractor built by LeTourneau-Westinghouse Company, Peoria, Illinois, has been issued by the company.

By extensive use of photos, diagrams and charts, the folder shows how the unit's range of speeds cuts minutes from the work cycle, and reasons why the machine requires low maintenance and few repairs. Colorful blow-ups illustrate how anti-friction bearings put more horsepower to work, how the ma-

chine's heavy, all-welded steel case provides a big, rugged mounting for every operating assembly, and how electric motors at point of action give fast, positive, accurate control.

Also shown are features making for operator comfort, plus interchangeable tools ranging from bulldozer to snow plow.

This folder on the Tournatractor may be obtained by requesting Tournatractor Features Folder, Form 54-005-T, from Advertising Department, LeTourneau-Westinghouse Company, Peoria, Illinois.

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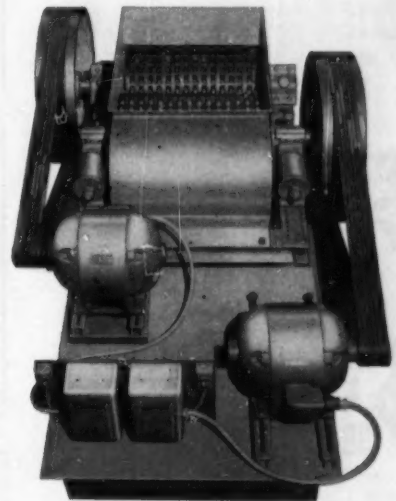
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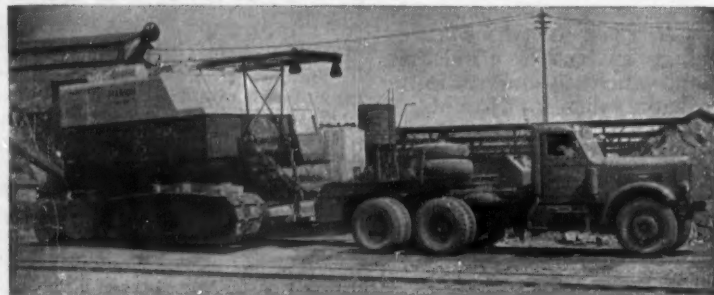
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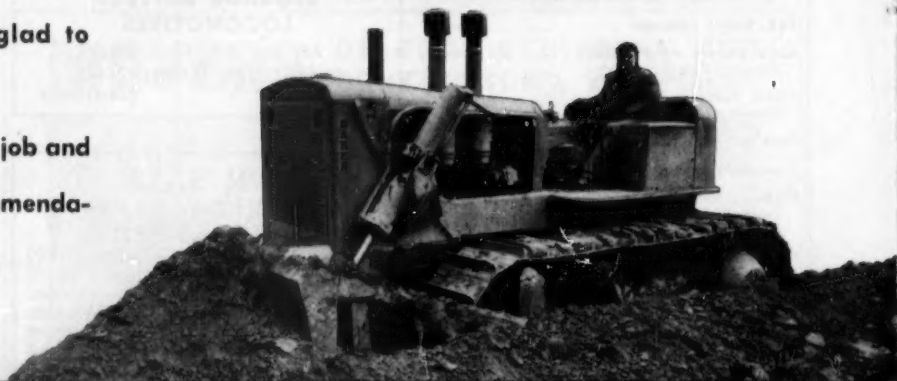
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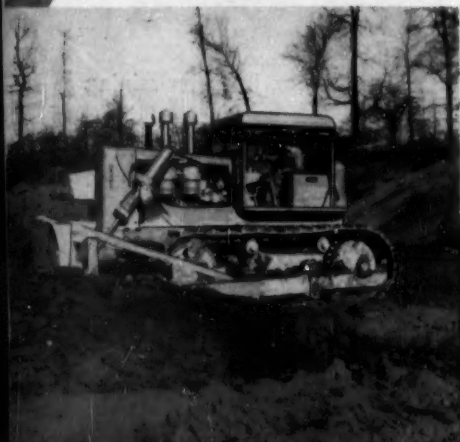
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